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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/803,968	03/19/2004	Kyoung-sig Roh	Q80077	6471

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EXAMINER	
TRAN, MY CHAU T	

ART UNIT	PAPER NUMBER
2629	

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05/12/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/803,968	ROH ET AL.	
	Examiner	Art Unit	
	MY-CHAU T. TRAN	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 February 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Application and Claims Status

1. Applicant's amendment and response filed 02/25/2008 are acknowledged and entered.

2. Claims 1-8 were pending. Applicants have amended claim 8 and added claims 9-14. No claims were cancelled. Therefore, claims 1-14 are currently pending and are under consideration in this Office Action.

Status of Claim(s) Objection(s) and /or Rejection(s)

3. The objection of claim 8 has been withdrawn in light of applicant's amendments of claim 8 thereto.

Maintained Rejection(s)

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Wilson et al. (US 6,982,697 B2; *Filing Date of 05/31/2002*).

For ***claims 1-3, 7, 9, and 12***, Wilson et al. disclose a wireless input system (see e.g. Abstract; col. 1, line 14-19; col. 2, line 56 thru col. 3, line 20). In general, the input system includes a case, the radio frequency (RF) transceiver, power supply, microcontroller, and

orientation sensors that include an accelerometer and a magnetometer (see e.g. col. 3, lines 10-20; col. 4, lines 6-43; col. 9, lines 5-47; col. 18, lines 5-57; fig. 3). The accelerometer (refers to instant claimed accelerations detection unit) and magnetometer (refers to instant claimed magnetic field detection unit) outputs x, y, and z axis signals that is use to define the orientation of the input device in terms of its pitch, roll, and yaw angle about the x, y, and z axes of the coordinate system (refers to instant claimed detects a tilt angle/detects respective axial direction accelerations of the movement)(see e.g. col. 4, lines 6-43; col. 9, lines 5-47; col. 18, lines 5-57). The case houses the radio frequency (RF) transceiver, power supply, microcontroller, and orientation sensors (refers to instant claimed mounted in a pen-shaped body/handheld body), and can be in the shape of a cylindrical wand (refers to instant claimed handheld body) or a writing pen (refers to instant claimed pen-shaped body)(see e.g. col. 3, lines 10-20; col. 8, line 59 thru col. 9, line 4). The microcontroller (refers to instant claimed control unit) transmits via the RF transceiver (refers to instant claimed communication module) to the host computer (refers to instant claimed external computing device) orientation messages that contained the calculated values of the input system orientation about the x, y, and z axes of the coordinate system base on the output x, y, and z axis signals of the accelerometer and magnetometer (refers to instant claimed calculates absolute coordinates and instant claims 2, 9, and 12)(see e.g. col. 4, lines 6-43; col. 8, lines 16-37; col. 18, lines 5-50; figs. 11A and 11B). Additionally, Wilson et al. disclose that the type of accelerometer include a 3-axis accelerometer (refers to instant claim 2)(see e.g. col. 20, line 59 thru col. 21, line 3).

For ***claims 4-6, 8, 10, 11, 13, and 14***, Wilson et al. disclose the method of determining the orientation of the input system (see e.g. col. 2, line 56 thru col. 3, line 9; col. 3, lines 21-31;

col. 3, line 57 thru col. 4, line 43). The method comprises the steps of a) detecting the pitch, roll, and yaw angle about the x, y, and z axes of the coordinate system using the accelerometer and magnetometer (refers to instant claimed detecting step and claim 5); b) calculating the input system orientation about the x, y, and z axes of the coordinate system base on the measurements of the accelerometer and magnetometer (refers to instant claimed calculating step); c) transmitting the calculated values of the input system orientation about the x, y, and z axes of the coordinate system to the host computer (refers to instant claim 6)(see e.g. col. 3, line 57 thru col. 4, line 43; col. 8, lines 16-37; col. 18, lines 5-57; figs. 11A and 11B). The case of the input system houses the radio frequency (RF) transceiver, power supply, microcontroller, and orientation sensors that include an accelerometer and a magnetometer (refers to instant claimed mounted in a pen-shaped body/handheld body), and can be in the shape of a cylindrical wand (refers to instant claimed handheld body) or a writing pen (refers to instant claimed pen-shaped body)(see e.g. col. 3, lines 10-20; col. 4, lines 6-43; col. 8, line 59 thru col. 9, line 4; col. 9, lines 5-47; col. 18, lines 5-57; fig. 3). The microcontroller (refers to instant claimed control unit) transmits via the RF transceiver (refers to instant claimed communication module) to the host computer (refers to instant claimed external computing device) orientation messages that contained the calculated values of the input system orientation about the x, y, and z axes of the coordinate system base on the output x, y, and z axis signals of the accelerometer and magnetometer (refers to instant claimed calculates absolute coordinates and instant claims 10, 11, 13, and 14)(see e.g. col. 4, lines 6-43; col. 8, lines 16-37; col. 18, lines 5-57; figs. 11A and 11B). Additionally, Wilson et al. disclose that the type of accelerometer include a 3-axis accelerometer (refers to instant claim 5)(see e.g. col. 20, line 59 thru col. 21, line 3).

Therefore, the device and method of Wilson et al. do anticipate the instant claimed invention.

Response to Arguments

6. Applicant's arguments directed to the above 102(e) rejection were considered but they are not persuasive for the following reasons. Please note that the above rejection has been modified from it original version to more clearly address applicant's newly amended and/or added claims and/or arguments.

[1] Applicant contends that '*Wilson fails to disclose or suggest an acceleration detection unit mounted in the pen-shaped body which* ***detects respective axial direction accelerations*** *of the movement of the pen-shaped body*'.

[2] Applicant alleges that '*Wilson fails to disclose a communication module which transmits data to an external computing device, wherein the control unit controls the communication module* ***to transmit*** *the tilt angle detected at the magnetic field detection unit and* ***the acceleration detected at the acceleration detection unit*** *to the external computing device.*'

Thus, the device of Wilson et al. does not anticipate the presently claimed invention.

This is not found persuasive for the following reasons:

[1] The examiner respectfully disagrees. It is the examiner's position that Wilson et al. do disclose '*an acceleration detection unit mounted in the pen-shaped body which detects respective axial direction accelerations of the movement of the pen-shaped body*'. First, Wilson et al. disclose a pointer (refers to instant claimed input system) that includes a case having a shape wherein the shape includes a cylindrical wand (refers to instant claimed handheld body) or a writing pen (refers to instant claimed pen-shaped body)(see col. 3, lines 10-20; and col. 8, line

59 thru col. 9, line 4). The case houses the radio frequency (RF) transceiver, power supply, microcontroller, and orientation sensors that include an accelerometer and a magnetometer. As a result, Wilson et al. do disclose '*an acceleration detection unit mounted in the pen-shaped body*'. Wilson et al. also disclose that the orientation of the pointer is defined in terms of its pitch, roll, and yaw angle about the respective x, y, z axes of the coordinate system wherein the accelerometer signals representing the pitch and roll are use to establish the rotation matrix that defines the composition of rotation about the respective x, y, z axes of the coordinate system (see col. 18, lines 35-45 and 51-57), i.e. the accelerometer of Wilson et al. does '*detects respective axial direction accelerations of the movement of the pen-shaped body*'. Accordingly, Wilson et al. do disclose '*an acceleration detection unit mounted in the pen-shaped body which detects respective axial direction accelerations of the movement of the pen-shaped body*'. Second, applicant assertion that Wilson et al. only detect the pointer when it is motionless base on the citation of col. 19, lines 15-17 is improper because applicant has taken this citation out of context. The entire paragraph, i.e. col. 19, lines 15-56, discussed some of the pitfall of the computation procedure, i.e. the first sentence of the paragraph states that '*It is noted that there is a number of caveats to the foregoing procedure*', wherein in one is determining whether the pointer is in motion or motionless when the accelerometer reading were captured and the other is determining the true magnetic north, and how these pitfall are overcome. Consequently, Wilson et al. do not disclose only detecting the pointer when it is motionless. Moreover, applicant is reminded that the patents are relevant as prior art for all they contain. See MPEP § 2123 (I), which states:

> "The use of patents as references is not limited to what the patentees describe as their own inventions or to the problems with which they are concerned. They are part of the literature of the art, relevant for all

they contain." *In re Heck*, 699 F.2d 1331, 1332-33, 216 USPQ 1038, 1039 (Fed. Cir. 1983) (quoting *In re Lemelson*, 397 F.2d 1006, 1009, 158 USPQ 275, 277 CCPA 1968)).

[2] The examiner respectfully disagrees. It is the examiner's position that Wilson et al. do disclose '*a communication module which transmits data to an external computing device, wherein the control unit controls the communication module to transmit the tilt angle detected at the magnetic field detection unit and the acceleration detected at the acceleration detection unit to the external computing device*'. First, Wilson et al. disclose that the outputs of the sensors, i.e. the accelerometer and magnetometer, are periodically packaged as orientation messages and transmit using the RF transceiver to the base station, which is a computer, i.e. Wilson et al. disclose '*a communication module which transmits data to an external computing device*' (see col. 2, lines 59-67). Second, Wilson et al. disclose that the pointer's microcontroller packages and transmits the orientation messages, i.e. Wilson et al. disclose '*wherein the control unit controls the communication module to transmit the tilt angle detected at the magnetic field detection unit and the acceleration detected at the acceleration detection unit to the external computing device*' (see col. 3, lines 21-31). As a result, Wilson et al. do disclose '*a communication module which transmits data to an external computing device, wherein the control unit controls the communication module to transmit the tilt angle detected at the magnetic field detection unit and the acceleration detected at the acceleration detection unit to the external computing device*'.

Therefore, the teachings of Wilson et al. do anticipate the device and method of the instant claims, and the rejection is maintained.

Conclusion

7. No claims are allowed.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T. TRAN whose telephone number is (571)272-0810. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MY-CHAU T. TRAN/
Primary Examiner, Art Unit 2629

May 10, 2008